

## REMARKS

Claims 1-26 are pending in this application. In an Office Action mailed April 6, 2006 ("OA"), the Examiner rejected claims 1-26. In this response, the Applicants amend claims 2, 9, and 16 for further clarity only and not to overcome the rejections. Applicants respectfully traverse the rejections and request reconsideration based on the following remarks.

In addition, Applicants do not automatically agree with or acquiesce in the Examiner's characterization of the claims or the prior art, even if those characterizations are not addressed herein.

### **Claim Rejections under 35 U.S.C. § 101**

The Examiner rejected claims 1-7 and 15-21 under 35 U.S.C. § 101 alleging that these claims are directed to non-statutory subject matter. Applicants respectfully traverse the rejections and request reconsideration based on the following remarks.

Regarding claims 1-7, the Examiner stated that "[t]he cited claims do not produce a tangible result. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer." However, Applicants are claiming a computer-implemented method for controlling access to a data object and not a data structure. A computer-implemented method falls within the "process" statutory category. For a process to be considered non-statutory, the Examiner must establish that the process is an abstract idea, a natural phenomenon, or a law of nature. Here the Examiner has only stated that the method does not produce a tangible result without

providing any reasoning why the method does not provide a tangible or “real-world” result. Applicants respectfully submit that the Examiner has not established the prima facie case for establishing that claims 1-7 are directed to non-statutory subject matter.

Further, Applicants submit that claims 1-7 provide a tangible result because they are directed to a method for controlling access to a data object. If a copy of the data object is accessed by multiple individuals at once without the checking, the data object may no longer be useful if the modifications are not captured, potentially causing errors in a business process. See Applicants' specification at pages 2-3, paragraphs 6-8. Therefore, Applicants respectfully submit that claims 1-7 produce a tangible result and hence, are statutory.

Regarding claims 15-21, the Examiner stated that “[claim 15] clearly recites a ‘machine readable medium’, which may comprise a ‘propagation medium’.” The Examiner further states that “these data signals are not tangible, and cannot tangibly embody a computer program or process since a computer cannot understand/realize (i.e. execute) the computer program or process when embodied on the data signal.” However, Applicants are claiming a computer-readable medium comprising instructions for controlling access to a data object, and not a data signal. As stated by the Examiner in the § 101 rejection of claims 1-7, “a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware...and is thus statutory.” Based on this statement, the non-statutory rejections of claims 15-21 are contradictory. Accordingly, Applicants respectfully request the Examiner to clarify these reasons for rejection.

These contradictory statements notwithstanding, Applicants submit that claims 15-21 are tangible because they are directed to a computer-readable medium comprising instructions for controlling access to a data object. As stated above, without the checking, data objects may no longer be useful if the modifications are not captured. See Applicants' specification at pages 2-3, paragraphs 6-8. Therefore, Applicants respectfully submit that claims 15-21 produce a tangible result and hence, are statutory.

### **Claim Rejections under 35 U.S.C. § 102**

To establish a proper 102 rejection, each element of the claim must be disclosed expressly or inherently within the prior art. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The Examiner rejected claims 1, 3, 5, 8, 10, 12, 15, 17, 19 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,944,615 ("Teng"). Applicants respectfully traverse the rejection of these claims.

### **Claims 1, 3, and 5**

Claim 1 recites "checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location" (emphasis added).

Teng discloses a system for avoiding deadlock in a database. The system includes a lock manager 68 that limits access to a database 12 by requiring the system components obtain a lock on the target row or rows prior to accessing the rows. The lock manager 68 ensures the integrity of the database by issuing locks based on lock compatibility to prevent multiple transactions from accessing the row(s) of the database simultaneously.

But Teng's system does not teach or disclose checking whether the ID is associated with a storage location and accessing the data object if the ID is yet associated with a storage location. Teng is only concerned with checking whether the ID is contained in a lock object and does not disclose checking whether the ID is associated with a storage location. Accordingly, because Teng is not concerned with checking whether the ID is associated with a storage location, Teng does not disclose accessing the data object if the ID is not yet associated with a storage location.

By contrast, Applicants' claim 1 recites "checking...whether...the ID is associated with a storage location; and accessing the data object...if the ID is not yet associated with a storage location." For example, as shown in Figs. 1 and 4, the Applicants' system and method include the ability to check whether the ID is contained in an existing P-lock and check whether the ID is associated with an archive file (step 404). If the ID is not associated with an archive file, access is provided to the data object. This can limit the access of data within the data object to ensure that the data object has not been corrupted.

In summary, Applicants respectfully submit that Teng fails to teach or suggest computer-implemented method, as recited in claim 1, that includes "checking, before

accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location" (emphasis added). For at least these reasons, Applicants respectfully submit that claim 1 is patentable over Teng.

Claims 3 and 5 are dependent upon claim 1 and are patentable for at least the same reasons as claim 1.

Further, regarding claim 3, the Examiner stated that Teng discloses "the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID" at column 7, lines 36-48, which states:

FIG. 2(A) shows the initial state of the relevant portion of a data table 200 and its associated index table 202, as well as an associated lock table 204. The index table 202 is a unique key table that operates on a unique key (C1,C2). As seen in lock table 204, at least information on the row identification ("RID"), the lock type ("Lock"), lock attributes ("Attributes"), and the transaction holding the lock ("Transaction") are recorded therein. In FIG. 2(A), however, no locks are yet assigned.

*Id.*

As stated above, the lock table 204 includes the following data: RID, Lock, Attributes, and Transaction; none of which are a link to a storage location associated with the ID. The Examiner further refers to the lock table of Fig. 4, but the lock table of Fig. 4 includes the same columns as those described in the passage above. Thus, Fig. 4 does not provide a link to a storage location associated with the ID. These portions cited by the Examiner and the remaining portions of Teng fail to disclose "the lock object comprises a table, having a column for the ID and a column for a link to the storage

location associated with the ID" (emphasis added). For at least these reasons, Applicants respectfully submit that claim 3 is patentable over Teng.

Claims 8, 10, and 12

Claim 8 is directed to a computer system comprising: "memory having program instructions; storage means for storing data; at least one processor to execute the program instructions to perform operations comprising: checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location." As discussed above with respect to claim 1, Teng fails to disclose "checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location." Claim 8 contains a similar element. Therefore, claim 8 is patentable over Teng for at least the same reasons as claim 1.

Claims 10 and 12 are dependent upon claim 8 and are patentable for at least the same reasons as claim 8. Further, claim 10 is similar in scope to claim 3 and is patentable for the same reasons provided above regarding claim 3.

Claims 15, 17, and 19

Claim 15 is directed to a computer-readable medium comprising: "checking, before accessing the data object, whether the ID is contained in a lock object and the ID

is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location..”

As discussed above with respect to claim 1, Teng fails to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.”

Claim 15 contains a similar element. Therefore, claim 15 is patentable over Teng for at least the same reasons as claim 1.

Claims 17 and 19 are dependent upon claim 15 and are patentable for at least the same reasons as claim 15. Further, claim 17 is similar in scope to claim 3 and is patentable for the same reasons provided above regarding claim 3.

### **Claim Rejections under 35 U.S.C. § 103**

To establish a prima facie case of obviousness, MPEP § 2142 requires that (1) the prior art reference must teach or suggest all claimed elements, (2) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference, and (3) there must be a reasonable expectation of success.

The Examiner rejected claims 2, 4, 9, 11, 16, 18 under 35 U.S.C. §103(a) as allegedly being unpatentable over Teng in view of U.S. Patent No. 6,772,255 (Daynes).

### **Claims 2 and 4**

Claims 2 and 4 depend on independent claim 1. Claim 1 recites “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Daynes fails to overcome the deficiencies of Teng regarding claim 1. Daynes discloses a locking protocol, which provides access to a data object. But Daynes does not check, before accessing the data object, whether the ID is associated with a storage location. Therefore, Teng in view of Daynes fails to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Because claims 2 and 4 directly or indirectly depend upon claim 1, claims 2 and 4 are patentable over Teng and Daynes for at least the same reasons as claim 1.

Furthermore, claim 4 recites “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID,” (emphasis added). The Examiner asserted that “[t]his claim is rejected on grounds corresponding to the arguments given above for rejected claim 3 and is similarly rejected.” OA at page 7. Because claim 4 is similar to claim 3, Applicants again assert that Teng fails to disclose “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID,” (emphasis added). Daynes fails to overcome the deficiencies of Teng regarding claim 4 because Daynes does not provide a lock object including a table having a column for a link to the storage location associated with the ID. Therefore, Applicants respectfully submit that



Teng and Daynes fail to teach or disclose “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID.” For at least these reasons, Applicants respectfully submit that claim 4 is patentable over Teng in view of Daynes.

#### Claims 9 and 11

Claims 9 and 11 depend on independent claim 8. Claim 8 is directed to a computer system comprising: “memory having program instructions; storage means for storing data; at least one processor to execute the program instructions to perform operations comprising: checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” As stated above, Teng fails to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Daynes fails to overcome the deficiencies of Teng regarding claim 8. Therefore, Teng in view of Daynes fail to teach or disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Because claims 9 and 11 directly or indirectly depend upon claim 8, claims 9 and 11 are patentable over Teng and Daynes for at least the same reasons as claim 8.

Furthermore, claim 11 recites “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID,” (emphasis added). The Examiner asserted that “[t]his claim is rejected on grounds corresponding to the arguments given above for rejected claim 3 and is similarly rejected.” OA at page 7. Because claim 11 is similar to claim 3, Applicants again assert that Teng fails to disclose “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID,” (emphasis added). Daynes fails to overcome the deficiencies of Teng regarding claim 11 because Daynes does not provide a lock object including a table having a column for a link to the storage location associated with the ID. Therefore, Applicants respectfully submit that Teng and Daynes fail to teach or disclose “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID.” For at least these reasons, Applicants respectfully submit that claim 11 is patentable over Teng in view of Daynes.

#### Claims 16 and 18

Claims 16 and 18 depend on independent claim 15. Claim 15 is directed to a computer-readable medium comprising: “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location..” As discussed above with respect to claim 1, Teng fails to teach or disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage

location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Daynes fails to overcome the deficiencies of Teng regarding claim 15. Therefore, Teng in view of Daynes fail to teach or disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Because claims 16 and 18 directly or indirectly depend upon claim 15, claims 16 and 18 are patentable over Teng and Daynes for at least the same reasons as claim 15.

Furthermore, claim 18 recites “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID,” (emphasis added). The Examiner asserted that “[t]his claim is rejected on grounds corresponding to the arguments given above for rejected claim 3 and is similarly rejected.” OA at page 7. Because claim 18 is similar to claim 3, Applicants again assert that Teng fails to disclose “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID,” (emphasis added). Daynes fails to overcome the deficiencies of Teng regarding claim 18 because Daynes does not provide a lock object including a table having a column for a link to the storage location associated with the ID. Therefore, Applicants respectfully submit that Teng and Daynes fail to disclose “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID.” For at least these reasons, Applicants respectfully submit that claim 18 is patentable over Teng in view of Daynes.

The Examiner rejected claims 6, 7, 13, 14, and 20-26 under 35 U.S.C. §103(a) as allegedly being unpatentable over Teng in view of U.S. Patent No. 6,507,853 (Bamford).

Claims 6 and 7

Claims 6 and 7 depend upon claim 1. Claim 1 is directed to a computer implemented method comprising “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” As stated above, Teng fails to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Bamford fails to overcome the deficiencies of Teng regarding claim 1. Bamford is limited to transferring a lock along with a copy of a resource between multiple databases based on a command from a master database. Bamford is not concerned with “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Therefore, Teng in view of Bamford fail to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not

contained in the lock object or if the ID is not yet associated with a storage location.”

Because claims 6 and 7 directly or indirectly depend upon claim 1, claims 6 and 7 are patentable over Teng and Bamford for at least the same reasons as claim 1.

#### Claims 13 and 14

Claims 13 and 14 depend upon claim 8. Claim 8 is directed to a computer system comprising: “memory having program instructions; storage means for storing data; at least one processor to execute the program instructions to perform operations comprising: checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” As stated above, Teng fails to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Bamford fails to overcome the deficiencies of Teng regarding claim 8. Therefore, Teng in view of Bamford fail to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Because claims 13 and 14 directly or indirectly depend upon claim 8, claims 13 and 14 are patentable over Teng and Bamford for at least the same reasons as claim 8.

### Claims 20 and 21

Claims 20 and 21 depend upon claim 15. Claim 15 is directed to a computer-readable medium comprising: “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location..” As discussed above with respect to claim 1, Teng fails to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Bamford fails to overcome the deficiencies of Teng regarding claim 15. Therefore, Teng in view of Bamford fail to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Because claims 20 and 21 directly or indirectly depend upon claim 15, claims 20 and 21 are patentable over Teng and Bamford for at least the same reasons as claim 15.

### Claims 22-26

Claim 22 is directed to a memory for storing data, the memory comprising “a structure for controlling access to a data object having an identifier (ID), the structure comprising a first lock object, storing the ID of the data object and a link to a storage location where the data object is stored, and a second lock object storing the ID of the data object.”

Claim 22 includes a similar limitation provided in claim 3. As stated above, regarding claim 3, Teng's lock table 204 includes a RID, a Lock, Attributes, and a Transaction; none of which are a link to a storage location associated with the ID. The Examiner further refers to the lock table of Fig. 4, but the lock table of Fig. 4 includes the same columns as those described in the passage above. Thus, Fig. 4 does not provide a link to a storage location associated with the ID. Regarding claim 22, Teng fails to disclose "a first lock object, storing the ID of the data object and a link to a storage location where the data object is stored" (emphasis added). Bamford fails to overcome the deficiencies of Teng. Thus, Teng in view of Bamford fail to disclose "a first lock object, storing the ID of the data object and a link to a storage location where the data object is stored."

Inter alia, Teng does not explicitly indicate "a second lock object." While, as the Examiner points out, Bamford refers to "a second lock object," Bamford does not teach or disclose a second lock object storing the ID of the data object.

For at least these reasons, Applicants respectfully submit that claim 22 is patentable over Teng in view of Bamford.

Claims 23-26 depend on claim 22 and are patentable for at least the same reasons as claim 22.

### **Conclusion**

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: June 29, 2006

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